

Title (en)

Spindle powered adjustable chuck.

Title (de)

Mittels Spindelantrieb einstellbares Spannfutter.

Title (fr)

Mandrin de serrage ajustable entraîne par la broche.

Publication

EP 0106240 A2 19840425 (EN)

Application

EP 83109776 A 19830929

Priority

US 42804682 A 19820929

Abstract (en)

A spindle powered adjustable chuck for forcefully gripping a workpiece capable of automatically adjusting gripping diameter comprising a support frame having a plurality of radially oriented jaw receiving compartments, jaw means including a plurality of jaws being displaceable within the jaw receiving compartments, and worm gear means operatively associated with each jaw for radially displacing the jaw means, clamping means for simultaneously displacing the jaw means to a clamping position for forcefully engaging the workpiece therebetween preparatory to rotating the chuck for operation, spindle means for rotatively driving the support frame, adjusting means for simultaneously changing the gripping diameter of the jaw means including planetary gear train means including an internally splined sun gear and a plurality of planetary gears, splined shaft means for coupling the planetary gears to the worm gear means, and two position splined key means for operatively engaging and disengaging the planetary gear train means, including compression spring means for biasing the splined key means to a first position whereat the planetary gear train is fixed relative to the support frame, whereby rotation of the spindle can rotate a workpiece clamped to the support frame, the splined key means being displaceable from the first position to second position acting against the compression spring means, thereby rotationally fixing the sun gear of the planetary gear train means whereby the support frame is rotatively free of the sun gear, so that rotation of the support frame rotatively drives the planetary gear train means, thereby adjusting the gripping diameter through the worm gear means.

IPC 1-7

B23B 31/16

IPC 8 full level

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CPC (source: EP US)

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